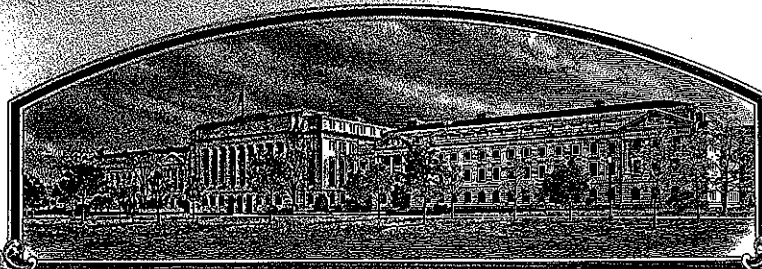


No.

200600281



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

*Monsanto Company*

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE REQUIREMENTS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'DPC05'

*In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this sixth day of February, in the year two thousand and seven.*

Attest:

*Blm Zee*

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*W. H. Johnson*

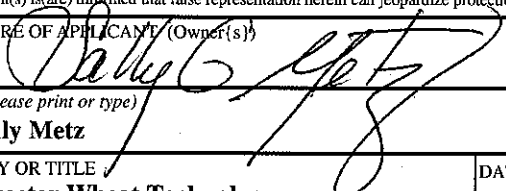
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

**APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**  
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the privacy Act of 1974 (5 U.S.C. 552a)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421) Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) <b>Monsanto Company</b>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER <b>N97-329ES</b>		3. VARIETY NAME <b>DPC05</b>	
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) <b>800 N. Linbergh Blvd. Mail Zone:E3NA  Creve Coeur, Missouri 63167</b>		5. TELEPHONE (include area code) <b>314.694.6089</b>		<div style="border: 1px solid black; padding: 2px;"> <b>FOR OFFICIAL USE ONLY</b>          PVPO NUMBER  <b>200600281</b> </div>	
		6. FAX (include area code) <b>314.694.7250</b>		F I L I N G DATE <b>September 5, 2006</b>	
7. GENUS AND SPECIES NAME <b><u>Triticum aestivum</u></b>		8. FAMILY NAME (Botanical) <b>Gramineae</b>		F E E S FILING AND EXAMINATION FEE: <b>4382.00</b>	
9. CROP KIND NAME (common name) <b>Hard Red Spring Wheat</b>				R E C E I V E D DATE <b>9-05-2006</b>	
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (common name) <b>Corporation</b>				C E R T I F I C A T I O N CERTIFICATION FEE <b>768.00</b>	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION <b>Delaware</b>		12. DATE OF INCORPORATION <b>1933</b>		D A T E <b>12-12-2006</b>	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS <b>Ms. Sally Metz</b> <b>800 N. Lindbergh Blvd.</b> <b>Creve Coeur, Missouri 63167</b>				AND <b>Dr. Rollin Sears</b> <b>6515 Ascher Road</b> <b>Junction City, Kansas 66441</b> <b>cc Chris Bruns rbruns@frrl.com</b> <b>cc Chris Bruns CRBRUNS@UPBroadband.net</b>	
				14. TELEPHONE (include area code) <b>314.694.6089</b>	
				15. FAX (include area code) <b>314.694.7250</b>	
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (follow instructions on reverse)					
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Applicant's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds, or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$4,382), made payable to "Treasurer of the United States" (Mail to PVPO)					
17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act)					
<input checked="" type="checkbox"/> YES (if "yes", answer items 18 and 19 below) <input type="checkbox"/> NO (if "no", go to item 20)					
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?					
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					
19. IF 'YES' TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDERS SEED?					
<input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED					
20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES?					
<input checked="" type="checkbox"/> YES (IF "YES", give names of countries and dates) <input type="checkbox"/> NO					
21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.					
The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.					
Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF APPLICANT (Owner(s)) 			SIGNATURE OF APPLICANT (Owner(s))		
NAME (Please print or type) <b>Sally Metz</b>			NAME (Please print or type)		
CAPACITY OR TITLE <b>Director Wheat Technology</b>		DATE <b>8-17-06</b>		CAPACITY OR TITLE <b>1</b>	

## INSTRUCTIONS

**GENERAL:** To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 <http://www.ams.usda.gov/lsg/seed.htm>.

## ITEM

- 19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;  
(2) the details of subsequent stages of selection and multiplication;  
(3) evidence of uniformity and stability; and  
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;  
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and  
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See *Regulations and Rules of Practice, Section 97.103*).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

**22. CONTINUED FROM FRONT** (Please provide a statement as to the limitation and sequence of generations that may be certified.)

The variety 'DPC05' will be constituted from Breeder seed, and proceed through Foundation, Registered and Certified in succeeding generations. Generations which may be multiplied will be limited to Breeder seed, Foundation, Registered and Certified.

**23. CONTINUED FROM FRONT** (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

Limited quantities of Certified seed stocks of DPC05 were sold in North Dakota in the spring of 2006.

**24. CONTINUED FROM FRONT** (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

**NOTES:** It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

## *Exhibit A.*

### *Origin and Breeding History of DPC05*

DPC05 originated from the cross "Lars//Sonja/WI88-028" which was made in Berthoud, CO during the fall crossing session of 1993. Its pedigree consists of AgriPro hard red spring varieties Lars and Sonja. WI88-028 was an AgriPro experimental hard red winter wheat derived from the cross "W84-179/Mesa". W84-179 was derived from a spring x winter bulk selected at Berthoud in 1980. The possible hard red winter parents of this bulk include Hawk, Newton, TAM W101, Rocky, Wings, Vona, Centurk, Archer, W332 and Sage. The possible hard red spring parents of this bulk include MN7409, MN7430, MN7431, MN7125, MN7122, Angus, Marshall, Olaf, Fletcher, Kitt, Lark, Wared and 803-5 (Era/Tobari 66//Lovrin11).

Single heads were selected from the F2 population of this cross at Berthoud, CO during the 1994 season. Selections were based on height. Single seed descent was used to advance these selections through the F3 and F4 generations in the Berthoud greenhouse during the fall and winter of 1994-95. F5 headrows of these selections were planted at Casselton, ND in 1995 where they were further screened for height, straw strength, foliar diseases, scab, leaf rust and stem rust. Selected F5 headrows were individually bulk harvested. An F6 increase plot was grown at Berthoud and observation plots were grown at Casselton, ND, Park River, ND and Crookston, MN in 1996. Selections were further screened on the previously mentioned traits as well as breadmaking quality. The experimental designation N97-0329ES was assigned in 1997 when it was first entered into yield trials. It was tested in AgriPro yield nurseries in North Dakota, South Dakota and Minnesota during 1997 through 2005.

In 2000, 75 heads were pulled from a seed increase plot at Berthoud, CO. These were grown as headrows in 2001 where uniform rows were bulked at harvest. In 2002, the head-row bulked seed was grown in a 0.3 acre pre-breeder increase which produced 193 lbs. In 2003, 1.0 acre of Breeder seed was grown near Loveland, CO which produced 2829 lbs. Foundation seed production was grown on 28 acres in Crookston, MN in 2004.

DPC05 has been uniform and stable since 2002. About 0.8% of the plants were rogued from the initial Breeder's Seed increase in 2003. Approximately 90% of the variant plants were taller height wheat plants (1 to 3 cm.) and approximately 10% were bronze chaffed plants. Up to 1.0% variant plants may be encountered in subsequent generations.

***Exhibit B.***  
***Statement of Distinctness***

DPC05 is most similar to the hard red spring wheat 'Norpro'. However, it can be easily distinguished by the following morphological characteristics:

- DPC05 has a midwide glume width at maturity (Berthoud, CO 2005, and Lucerne, CO 2004). Norpro has a wide glume width at maturity (Berthoud, CO 2005, and Lucerne, CO 2004).
- DPC05 has a short glume length at maturity (Berthoud, CO 2005, and Lucerne, CO 2004). Norpro has a midlong glume length at maturity (Berthoud, CO 2005, and Lucerne, CO 2004).
- DPC05 has a rounded shoulder shape at maturity (Berthoud, CO 2005, and Lucerne, CO 2004). Norpro has a square shoulder shape at maturity (Berthoud, CO 2005, and Lucerne, CO 2004).
- DPC05 has an oval seed shape (Berthoud, CO 2005, and Lucerne, CO 2004). Norpro has an ovate seed shape (Berthoud, CO 2005, and Lucerne, CO 2004).
- DPC05 has short hairs on the brush of the seed (Berthoud, CO 2005, and Lucerne, CO 2004). Norpro has an medium length hairs on the brush of the seed (Berthoud, CO 2005, and Lucerne, CO 2004).
- DPC05 has rounded cheeks on the seed (Berthoud, CO 2005, and Lucerne, CO 2004). Norpro has angular cheeks on the seed (Berthoud, CO 2005, and Lucerne, CO 2004).
- DPC05 has a tapering head shape (Berthoud, CO 2005, and Lucerne, CO 2004). Norpro has a strap head shape (Berthoud, CO 2005, and Lucerne, CO 2004).

REPRODUCE LOCALLY. Include form number and date on all reproductions.

Form Approved OMB NO 0581-0055

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 2.5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE DIVISION  
BELTSVILLE, MARYLAND 20705

EXHIBIT C

OBJECTIVE DESCRIPTION OF VARIETY  
WHEAT (*Triticum* Spp.)

NAME OF APPLICANT(S) <b>Monsanto Company</b>	TEMPORARY OR EXPERIMENTAL DESIGNATION <b>N97-0329ES</b>	VARIETY NAME <b>DPC05</b>
ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country) <b>800 N. Linbergh Blvd. Mail Zone: E3NA Creve Couer, Missouri 63167</b>		FOR OFFICIAL USE ONLY  PVPO NUMBER <b>200600281</b>

## PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. 0 9 9 or 0 9) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: \_\_\_\_\_ Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND: <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 30px; height: 30px; text-align: center; margin-right: 10px;">1</div> <div> 1=Common 2=Durum 3=Club 4=Other (specify) _____ </div> </div>		2. VERNALIZATION: <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 30px; height: 30px; text-align: center; margin-right: 10px;">1</div> <div> 1=Spring 2=Winter 3=Other (specify) _____ </div> </div>	
3. COLEOPTILE ANTHOCYANIN: <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 30px; height: 30px; text-align: center; margin-right: 10px;">1</div> <div> 1=Absent    2=Present </div> </div>		4. JUVENILE PLANT GROWTH: <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 30px; height: 30px; text-align: center; margin-right: 10px;">3</div> <div> 1=Prostrate    2=Semi-erect    3=Erect </div> </div>	
5. PLANT COLOR (boot stage): <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 30px; height: 30px; text-align: center; margin-right: 10px;">2</div> <div> 1 = Yellow-Green 2 = Green 3 = Blue-Green </div> </div>		6. FLAG LEAF (boot stage): <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 30px; height: 30px; text-align: center; margin-right: 10px;">2</div> <div> 1 = Erect    2 = Recurved 1 = Not Twisted    2 = Twisted 1 = Wax Absent    2 = Wax Present </div> </div>	
7. EAR EMERGENCE: <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div style="border: 1px solid black; width: 30px; height: 30px; text-align: center; margin-right: 10px;">0</div> <div style="border: 1px solid black; width: 30px; height: 30px; text-align: center; margin-right: 10px;"></div> <div style="border: 1px solid black; width: 30px; height: 30px; text-align: center; margin-right: 10px;">0</div> <div style="margin-left: 10px;">Number of Days (Average)</div> </div> <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div style="border: 1px solid black; width: 30px; height: 30px; text-align: center; margin-right: 10px;">0</div> <div style="border: 1px solid black; width: 30px; height: 30px; text-align: center; margin-right: 10px;">0.5</div> <div style="margin-left: 10px;">Number of Days Earlier Than * <u>FREYR</u></div> </div> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 30px; height: 30px; text-align: center; margin-right: 10px;"></div> <div style="border: 1px solid black; width: 30px; height: 30px; text-align: center; margin-right: 10px;"></div> <div style="margin-left: 10px;">Number of Days Later Than *</div> </div> <p style="text-align: right; margin-top: 5px;">*Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial</p>			
8. ANTHR COLOR: <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 30px; height: 30px; text-align: center; margin-right: 10px;">1</div> <div> 1 = YELLOW    2 = PURPLE </div> </div>			

200600281

## 9. PLANT HEIGHT: (from soil to top of head, excluding awns):

0	7	0
---	---	---

cm (Average)

cm Taller Than

\*

--	--

Same As

\*

LARS

--	--

cm Shorter Than

\*

## 10. STEM:

## A. ANTHOCYANIN

1
---

1 = Absent    2 = Present

## B. WAXY BLOOM

2
---

1 = Absent    2 = Present

## C. HAIRINESS (last internode of rachis)

2
---

1 = Absent    2 = Present

## D. INTERNODE

1
---

1 = Hollow    2 = Semi-solid    3 = Solid

5
---

Number of Nodes

## E. PEDUNCLE

1
---

1 = Erect    2 = Recurved    3 = Semi-erect

0	9
---	---

cm Length

## F. AURICLE

2
---

Anthocyanin    1 = Absent    2 = Present

2
---

Hair:    1 = Absent    2 = Present

## 11. HEAD: (At Maturity)

## A. DENSITY

2
---

1 = Lax  
2 = Middense (Laxidense)  
3 = Dense

## B. SHAPE

1
---

1 = Tapering  
2 = Clavate  
3 = Strap  
4 = Other (specify) \_\_\_\_\_

## C. CURVATURE

1
---

1 = Erect  
2 = Inclined  
3 = Recurved

## D. AWNEDNESS

4
---

1 = Awnless  
2 = Apically awnletted  
3 = Awnletted  
4 = Awned

## 12. GLUMES: (At Maturity)

## A. COLOR

1
---

1 = White  
2 = Tan  
3 = Other (specify) \_\_\_\_\_

## B. SHOULDER

3
---

1 = Wanting    2 = Oblique  
3 = Rounded    4 = Square  
5 = Elevated    6 = Apiculate  
7 = Other (Specify) \_\_\_\_\_

## C. SHOULDER WIDTH

2
---

1 = Narrow  
2 = Medium  
3 = Wide

## D. BEAK

3
---

1 = Obtuse  
2 = Acute  
3 = Acuminate

## E. BEAK WIDTH

2
---

1 = Narrow  
2 = Medium  
3 = Wide

## F. GLUME LENGTH

1
---

1 = Short (ca. 7mm)  
2 = Medium (ca. 8mm)  
3 = Long (ca. 9mm)

## G. WIDTH

2
---

1 = Narrow (ca. 3mm)  
2 = Medium (ca. 3.5mm)  
3 = Long (ca. 4mm)

6

## 13. SEED:

## A. SHAPE

**2**

- 1 = Ovate  
2 = Oval  
3 = Elliptical

## B. CHEEK

**1**

- 1=Round  
2=Angular

## C. BRUSH

**1**

- 1 = Short  
2 = Medium  
3 = Long

**1**

- 1 = Not Collared  
2 = Collared

## D. CREASE

**1**

- 1 = Width 60% or less of Kernel  
2 = Width 80% or less of Kernel  
3 = Width Nearly as Wide as Kernel

**1**

- 1 = Depth 20% or less of Kernel  
2 = Depth 35% or less of Kernel  
3 = Depth 50% or less of Kernel

## E. COLOR

**3**

- 1 = White  
2 = Amber  
3 = Red

4 = Other (Specify) \_\_\_\_\_

## F. TEXTURE

**1**

- 1 = Hard  
2 = Soft

3 = Other (Specify) \_\_\_\_\_

## G. PHENOL REACTION (See Instructions)

**0**

1 = Ivory

2 = Fawn

3 = Light Brown

4 = Dark Brown

5 = Black

## H. SEED WEIGHT

g/1000 Seed (Whole number only)

## I. GERM SIZE

**3**

1 = Small

2 = Midsize

3 = Large

## 14. DISEASE:

## PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

(0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Intermediate 4 = Tolerant)

**2** 4Stem Rust (*Puccinia graminis* f. sp. *tritici*)**0**Stripe Rust (*Puccinia striiformis*)**3**Tan Spot (*Pyrenophora tritici-repentis*)**0**Halo Spot (*Selenophoma donacis*)**0**

Septoria nodorum (Glume Blotch)

**0**

Septoria avenae (Speckled Leaf Disease)

**0**

Septoria tritici (Speckled Leaf Blotch)

**3**Scab (*Fusarium* spp.)**0**

Black Point (Kernel Smudge)

**0**

Barley Yellow Dwarf Virus (BYDV)

**0**

Soilborne Mosaic Virus (SBMV)

**0**

Wheat Yellow (Spindle Streak) Mosaic Virus

**0**

Wheat Streak Mosaic Virus (WSMV)

**0**

Other (specify) \_\_\_\_\_

**0**

Other (specify) \_\_\_\_\_

**0**

Other (specify) \_\_\_\_\_

**3** 4Leaf Rust (*Puccinia recondita* f. sp. *tritici*)**0**Loose Smut (*Ustilago tritici*)**0**Flag Smut (*Urocystis agropyri*)**0**Common Bunt (*Tilletia tritici* or *T. laevis*)**0**Dwarf Bunt (*Tilletia controversa*)**0**Karnal Bunt (*Tilletia indica*)**0**Powdery Mildew (*Erysiphe graminis* f. sp. *tritici*)**0**

Snow Molds

**0**Common Root Rot (*Fusarium*, *Cochliobolus* and *Bipolaris* spp.)**0**Rhizoctonia Root Rot (*Rhizoctonia solani*)**0**Black Chaff (*Xanthomonas campestris* pv. *translucens*)**0**Bacterial Leaf Blight (*Pseudomonas syringae* pv. *syringae*)**0**

Other (specify) \_\_\_\_\_

**0**

Other (specify) \_\_\_\_\_

**0**

Other (specify) \_\_\_\_\_

**0**

Other (specify) \_\_\_\_\_

## 15. INSECT:

(0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

**0**Hessian Fly (*Mayetiola destructor*)**0**

Other (specify) \_\_\_\_\_

**0**Stem Sawfly (*Cephus* spp.)**0**

Other (specify) \_\_\_\_\_

**0**Cereal Leaf Beetle (*Oulema melanopa*)**0**

Other (specify) \_\_\_\_\_

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15. INSECT: (continued) (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

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0

Russian Aphid (*Diuraphis noxia*)

☐

Other (specify)

0

Greenbug (*Schizaphis graminum*)

☐

Other (specify)

0

Aphids

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS:

None

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***Exhibit D.***  
***Additional Description of DPC05***

DPC05 is a hard red spring wheat bred and developed by Syngenta Seeds, Inc. Heading is medium-early and test weight is very good. It is a short semidwarf with strong straw strength. It is tolerant to the prevalent races of leaf and stem rust. Foliar disease protection is very good and fusarium tolerance is intermediate. In AgriPro's quality evaluations, DPC05 has been characterized as an extra strong mixing type with properties similar to Glenlea. Its protein is intermediate.

Juvenile growth habit is erect. Plant color at boot stage is green. Auricle anthocyanin and auricle hairs are present. Flag leaf at boot stage is recurved and twisted. Anther color is yellow at anthesis. Waxy bloom is present on the head, stem and flag leaf sheath. Anther color is yellow. Head shape is tapering and awned. Glumes are glabrous, short in length and midwide in width, with rounded shoulders and acuminate beaks. Seed shape is oval. Brush hairs are short in length and occupy a medium area of the seed. Seed crease depth is shallow and width is narrow. Embryos are large. Seed cheeks are rounded.

DPC05 is well adapted to the eastern spring wheat growing areas of North and South Dakota and Minnesota.  
Company.

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## 1998-2005 OVER YEAR QUALITY SUMMARY - AGRIPRO DATA

YEAR- LOC	PROT		FLR	MIXOGRAM DATA				NOR.	BAKING DATA				
	WHT	FLR		YLD	ASH	PEAK	PEAK		TOL	HARD	ABS	MIX	LOAF
			TIME			HT	TIME	VOL.					
DPC05													
1998-MW	13.4	12.6	74.8		5.0	5.3	1129	70	65.0	5.0	1100	3	2
2001-MW	14.2	12.9	71.2		6.0	4.8	1284	68	63.0	7.0	1000	4	3
2003-BKPR	14.2	13.0	73.1	0.37	5.8	5.3	1216	63	68.0	5.1	1165	4	3
				7									
2004-BKPR	13.9	12.9	72.7	0.40	6.0	5.3	1599	77	68.5	5.9	1030	3	3
				1									
2005-ARPR	14.2	13.2	72.0		5.0	5.0	1365	57	66.5	4.9	1170	4	3
				0.38									
AVERAGE	14.0	12.9	72.8	9	5.6	5.1	1319	67.0	66.2	5.6	1093	3.6	2.8
GLENLEA													
1998-MW	14.1	12.9	74.4		4.8	5.3	1219	89	65.0	5.3	920	4	3
2001-MW	15.4	14.4	68.5		6.0	5.3	1302	81	67.5	6.4	1100	4	2
2003-BKPR	15.2	13.6	71.2	0.46	6.3	5.8	1091	68	69.0	5.8	1160	4	3
				3									
2004-BKPR	13.5	12.5	72.7	0.49	8.0	5.0	1632	81	69.0	7.8	975	3	3
				3									
2005-ARPR	14.4	13.6	69.8		5.0	5.3	1238	85	69.0	5.2	1125	3	3
				0.47									
AVERAGE	14.5	13.4	71.3	8	6.0	5.3	1296	80.8	67.9	6.1	1056	3.6	2.8
ALSEN													
2003-BKPR	15.4	13.8	71.4	0.40	3.8	5.5	892	79	69.5	3.3	1100	4	3
				4									
2004-BKPR	14.8	13.9	71.7	0.43	3.8	5.3	1393	88	68.5	3.3	1045	3	2
				6									
2005-ARPR	15.3	14.2	72.1		3.8	5.3	1062	78	69.5	3.4	1160	5	3
				0.42									
AVERAGE	15.2	14.0	71.7	0	3.8	5.4	1116	81.7	69.2	3.3	1102	4.0	2.7

## Location

## Key:

MW - Casselton, ND/Park River, ND Blend

BKPR - Breckenridge, MN/Park River, ND Blend

ARPR - Argusville, ND/Park River, ND Blend

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**2002-5 OVER YEAR AGRONOMIC SUMMARY RANKED BY YIELD - AGRIPRO DATA**

VARIETY	YIELD - BU/A <sup>3</sup>					TEST		HEAD. <sup>2</sup> 1-9	HT. 1-9	LO 1
	02	03	04	05	AVG	WT. LBS/BU	PROT. %			
KNUDSON	46.8	79.1	79.3	61.3	66.6	59.9	14.1	5.1	5.7	3
FREYR	46.8	79.5	75.2	60.7	65.6	60.2	14.9	4.4	6.7	3
DPC05	43.9	77.1	75.1	58.2	63.6	60.6	14.4	3.8	3.9	2
ALSEN	39.0	69.4	71.6	53.8	58.5	61.0	15.4	4.0	5.9	3
REEDER	42.6	73.0	69.2	46.8	57.9	59.4	15.0	4.3	6.8	4
GLENLEA <sup>1</sup>	35.9	64.9	60.3	43.5	51.2	59.3	14.6	7.1	8.4	4
MEAN	42.5	73.8	71.8	54.1	60.5	60.1	14.7	4.8	6.2	3
NO. OF LOCS.	4	6	5	5	20	19	19	17	8	

<sup>1</sup>Not tested in 2002, data adjusted for averages<sup>2</sup>Heading: 1= early; Height: 1 = short; Lodging: 1 = no lodging; Foliar disease/Leaf R.: 1 = no disease; Seed score: 1=highest grade<sup>3</sup>Locations: ND - Argusville, Maddock, Valley City, Park River; MN - Crookston, Breckenridge; SD - Northville, Groton, Bristol<sup>4</sup>Worth (agronomic assessment): 1= good

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

EXHIBIT E  
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) <b>Monsanto Company</b>	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER <b>N97-329ES</b>	3. VARIETY NAME <b>DPC05</b>
4. ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country) <b>800 N. Linbergh Blvd. Mail Zone:E3NA Creve Coeur, MO 63167</b>	5. TELEPHONE (include area code) <b>314.694.6089</b>	6. FAX (include area code) <b>314.694.7250</b>
	7. PVPO NUMBER <b>200600281</b>	

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain ☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☒ YES ☐ NO

10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

Please see following page.

## PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provide and employer.

***Exhibit E.***  
***Statement of the Basis of Applicant's Ownership***

The variety for which Plant Variety Protection is hereby sought was developed by Joe Smith, an employee of Syngenta Seeds, Inc. By agreement between employees and Syngenta, all rights to any invention, discovery, or development made by the employee while employed by Syngenta, were assigned to Syngenta Seeds, Inc., with no rights of any kind pertaining to 'DPC05' being retained by the employees.

By contractual agreement the variety 'DPC05' was purchased from Syngenta Seeds, Inc. in June of 1996 and is currently owned by Monsanto Company.